Computer Code

In the course of developing the Space Shuttle, NASA developed a computer code for analyzing aerodynamic heating and heat transfer on the Shuttle. That computer code found secondary application in missile research conducted by The Marquardt Company, Van Nuys, California, which is engaged in research, development and manufacture of air-breathing propulsion systems, space rockets, turbo products and ordnance systems. The code was made available to Marquardt by NASA's Computer Software Management and Information Center (COSMIC)®. Located at the University of Georgia, COSMIC supplies to industrial and other customers computer software—originally developed for government projects—that has secondary utility.

Called MINIVER, the code was used by Marquardt engineers to analyze heat transfer on missile bodies designed for the U.S. Navy and the U.S. Air Force; the accompanying photo shows a missile body in a Marquardt test facility. The company selected the code because it offers capabilities for performing the requisite heat transfer analysis by four different methods; the four analyses can then be compared and checked to insure accuracy of the calculations. Marquardt reported savings of $15,000 and three man-months of computer analysis time that would have been required to develop a similar code had MINIVER not been available.

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